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A new record *Thalerastria* Staudinger, 1898 species from Türkiye and the taxonomic status of the *diaphora* var. *laticincta* Staudinger, 1898 (Lepidoptera, Noctuidae)

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Abstract: A new record *Thalerastria* Staudinger, 1898 species from Türkiye and the taxonomic status of the *diaphora* var. *laticincta* Staudinger, 1898 (Lepidoptera, Noctuidae). Priamus 20 (2): 73-84, 41 figs.
In this study, *Thalerastria lehmanni* Hoppe & Fibiger, 2009 was presented as a new record for Türkiye. *Thalerastria diaphora* var. *laticincta* Staudinger, 1898 was redescribed and was upgraded from subspecies to species rank. In addition, three species, *diaphora, laticincta* and *lehmanni*, were morphologically examined and compared.
Key Words: *Noctuidae, Thalerastria, diaphora, laticincta, lehmanni,* new record, Türkiye.

Introduction

Until Hoppe & Fibiger (in Fibiger et al., 2009) described *Thalerastria lehmanni*, this genus was represented only by *diaphora* Staudinger, 1879. This species, which was described as monotypic from Amasya (Türkiye), was placed in the genus *Erastria* hesitantly in the original work by Staudinger. In fact, Nye (1975: 11, 183) stated that *Eastria* was a genus belonging to the family Geometridae, not the family Noctuidae. Hoppe & Fibiger (2009) stated that Staudinger may have founded the genus *Thalerastria* for this reason.

After Warren (1912: 295) demonstrated the differences between the last segment of the palpus, wing form and wing veins of *Thalerastria* and *Eulocastra* species, it was understood that *diaphora* belonged to *Thalerastria* and not to the genus *Eulocastra*, whose type species is *fasciata* Butler 1886, described from Australia. Warren (1914: 282) continued to use *Thalerastria* in his later studies. Hacker (1996) first considered *Thalerastria* at genus level, while in his later article (2016) he evaluated as a subgenus of *Ozarba* and *lehmanni* as a subspecies of *diaphora*. Shirvani (2012), Lödl et al. (2012) listed *diaphora*, *lehmanni* and *tamsi* in the genus *Thalerastria*. Seven (2000) and Şerban & Bercan (2017) also used the *Thalerastria diaphora* combination in their studies. However, Speidel & Hassler (1989), Karsholt & Razowski (1996) and Salem (2020) are listed under the genus *Eulocastra*. In studies on the fauna of Türkiye, it is seen that it is listed as *Eulocastria diaphora* in

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23 provinces in the Central, Eastern and Southeastern Regions (Koçak & Kemal, 2006, 2009, 2018, Seven & Akın, 2019, Kemal et al., 2020a-2020b). However, samples collected from Anamur (İçel) and Ovacık districts (Tunceli) raised suspicions due to their overall external appearance, leading to a morphological examination. Some differences in wing size, wing ground color, and in the median and marginal bands, along with important distinguishing characters in genital structures, were observed. These features show clear differences compared to *T. diaphora*. On the other hand, it was understood that the samples collected from Mardin in June 2022 had morphological features different from the *diaphora* and similar to the Ovacık, Bitlis and Elazığ samples, and with these characteristics, they were closer to var. *laticincta* Stgr., 1898. This situation necessitated a re-examination of this species group. In this study, the species of the genus *Thalerastria* in Türkiye were revised, faunistic and morphologically re-evaluated. While comprehensive molecular studies on species belonging to this genus are planned throughout Türkiye, the first results are briefly mentioned in this study.

Materials and Methods

In this study, samples belonging to the genus *Thalerastria* collected by night light traps from the Central Anatolia, Southern and Eastern provinces of Türkiye between 1981-2022 were examined. After the collected samples were prepared as required, Robinson (1976) was followed for permanent genital preparations. The samples were photographed with Canon EOS 70D and genitals were photographed with a stereo microscope connected to a computer with Leica S8APO, DFC290 resolution. Most of the specimens are in the Cesa collection, the rest are in Batman University (BTU), Bitlis University (BEU) and Gazi University Zoology Museum.

Results

Thalerastria diaphora (Staudinger, 1879)

Erastria? *diaphora* Staudinger,1879; Horae Soc.ent.ross. 14: 415-416. Type: 1♀: [Türkei]: Amasia (Kerasdere) [Kirazlıdere]. *Metachrostis atribasalis* (Hampson,1896), Proceedings of the Zoological Society of London 1896: 261, pl. 10. fig. 11. L. t.: [Yemen] Aden. *Thalpochares triangularis* Warren, 1888, Proceedings of the Zoological Society of London 1888: 309. L. t.: [India] Campbellpore.

Diagnosis (Fig. 2: 1, Fig. 3: 1-2, Fig. 4: 1a-1d): Forewing span and its measurements from base to apex varies between individuals. In males; from the wing base to the apex 6-8 mm and wingspan is 14-15 mm. Females; from the wing base to the apex 7-9 mm, and wingspan 16-18 mm.

In both individuals of this species, the forewing ground is generally cinnamon colored (yellow in *laticincta* and *lehmanni*). The forewings' discal and postdiscal lines are prominently light colored. These lines are not distinct or absent in *laticincta* and *lehmanni*. The submarginal band is relatively thicker and grooves deeper in *laticincta* than in *diaphora* and *lehmanni*. In *diaphora*, the patagia of both sexes are broadly fan-shaped, closer together and covered with grey scales. In *laticincta*, the patagia are not as developed as in *diaphora*, are far apart and covered with brown scales.

Male genitalia (Fig. 5: 1-6): The uncus is long and the distal end is hooked. From the base where it attaches to the tegument, towards the free end of the uncus, the 2/3 part the dorsal and ventral edges continue relatively parallel to each other up to the base of the hook. The scaphium is chitinous, forked and long, the dorsum of the anal tube is membranous, and the ventral part (subscaphium) is relatively chitinous. Valve long, costa and sacculus chitinous, and apical margin rounded. The saccular protrusion (ampulla) extending from the sacculus to the costa is in the shape of a little finger, and the point where it reaches the costa is convex. The juxta is quadrangular and the upper edge is concave. The anellus is one piece and has dense short hairs on it. The lateral arms of the

vinculum are strong and the expanded distal end wraps around the dorsal base of the tegument like a collar (this structure is the same in *laticincta* and *lehmanni*). Transtilla extends upwards on both sides of the juxta. The saccus is broadly V-shaped and in some individuals its free end has a distinct protrusion (GP3340). The upper 2/3 of the aedeagus, starting from the caecum, is swollen, thinning towards the apex, and is relatively chitinous. Inside the aedeagus there is a cornutus with a pointed tip and a slightly bow shape. It is protruding in the ventral part of cornutus, approximately in the middle, and in some individuals, near the tip.

Female genitalia (Fig. 6: 1): Papilla analis sparsely hairy (more dense in *laticincta*). The 8th tergite sclerite to which the posterior apophysis is attached is relatively wide (thin in *laticincta*, weak in *lehmanni*). The anterior apophysis is relatively longer than the posterior apophysis (similarly also in *laticincta* and *lehmanni*). The antrum is membranous, about half the size of the colliculum chitin and ductus bursae. The corpus bursae, together with the bursae appendix, form a C-shaped, and the proximal and distal ends that form the shape are balloon-like (the corpus bursae are larger in *laticincta*, and also the between the corpus bursae with the bursae appendix is relatively thick and short). In the corpus bursa, there is an ellipse-shaped signum with a ribbed in the middle (the signum rib is more prominent in *laticincta* and relatively regressed signum *lehmanni*).

Habitat (Fig. 1: 1-2): Mountain steppe.

Adult: Nocturnal.

Vertical distribution: 890-2400m.

Material studied: (24 male, 21 female); 1♂**:** Niğde Pr., Ulukışla, Horoz (51Db), 1200m, 05.vi.1981, A.Koçak leg. 1♂: Ankara Pr., Ayaş Mt., Akyatak (06Ve) 1260m, 11. vii. 1986, A. Koçak leg. 2♀: Kars Pr., Akçay (36Db) 1200m, 10. vii. 2007 and 1♂1♀: Van Pr., Tuşba, Ağartı (65Np2) 1950m, 27. vi. 2014 and 2♂2♀: Başkale, Ziyanis E. (65Bo) 2400m, 9. vii. 2015 and 3♂1♀: Çatak, Saklıvadi (65Df) 2030m, 25. vi. 2017 and 1♂: Malatya Pr., Darende, Beybağı 1.6km N (44Ei), 1200m, 25. v. 2017 and 1♀: Beybağı (44Ei), 13. viii. 2018 and 1♀: Hakkari Pr., Sulphur valley (30Bt1) 1570m, 18. vi. 2018 and 2♂1♀: Sulphur valley (30Bt1) 1620m, 8. vii. 2018 and 1♂: Sümbül Mt. E., 1625m, 20. v. 2018 and 1♂1♀: Ağrı Pr., Doğubayazit vic. Ihsakpaşa Sarayı (04Cf) 1940m, 27. vi. 2019, M. Kemal & A. Koçak leg. 3♂2♀: Hakkari Pr., Yüksekova, Dağlıca (30Df), 2085m 22. vi. 2017 and 1♂1♀: 1520m, 24. vi. 2017, H. Uçak, leg. 1♂: Dağlıca, Bozkaya (30Df1) 1320m, 12. vi. 2021 and 1♂: Dağlıca, Yeşiltaş, 1520m, 3. vii. 2021 and 1♀: Adaklı, 2017m, 4. viii. 2021 and 1♀: Çukurca, Gündeş, Köprülü, 890m, 10. vi. 2021 and 3♂4♀: Malatya Pr., Darende, Beybağı 1.7km N (44Ei), 1200m, 7. viii. 2022, M. Kemal & H. Uçak leg., (Cesa coll.). 2♂2♀: Eskişehir Pr., Mihalıccık, Diközü, 854-1030m, 06-07.vi.2021, S. S. Çalışkan & M. Özdemir leg. (GU-coll.).

Ecological observations: It has been determined that adults generally fly from May to August in Türkiye populations. According to collection records, it is possible to say that the vertical distribution of this species is between 850-2400 meters and its habitat preference is mountainous steppes where *Astragalus* species are mostly found. The lower parts of Kirazlıdere (Kerastase sensu Staudinger), where *diaphora* was described, have become urbanized today, their status as natural areas has changed due to these settlements. Seven (2000) defined the habitat of the species as Mountain steppe, Oak forest and forest glades.

Distribution World and Tükiye: Palestine, Jordan, Armenia, Russia, Caucasus (Staudinger, 1898), According to the Cesa database information; Canary Islands (ES), North Africa, Middle East, Afganistan, Pakistan, India and Russia (Koçak & Kemal, 2015; Hacker, 2016), Macaronesian Archipelago (Hacker, 1996), Türkiye (Satudinger, 1879; Koçak & Kemal, 2006, 2009, 2015, 2018; Seven & Akın, 2019; Kemal et al., 2020b).

***Thalerastria laticincta* (Staudinger, 1898) (stat. nov.)**

Erastria diaphora var. *laticincta* Staudinger, 1898, Deutsche Entomologische Zeitschrift Iris. Dresden 10: 294. Türkei, Mardin.

Nomenclature. Misspelled as *"diaphora* var. *aticincta*" *by* Hacker (2016: 470), and thus unavailable according to the Articles 32.1 and 33.3 of the ICZN (1999).

Diagnosis (Fig. 2: 2, Fig. 3: 4-5, Fig. 4: 2a-2d): Antennae filiform, patagia, tegulae, the forewing basal, median triangular spot, submarginal area and ciliae dark brown. The forewing median triangular spot ends with a tapering and hindwing is covered with dense brown scales. The dark brown subterminal band is distinctly thicker and zigzag-shaped.

Head: Frons, vertex, antennae and base of antennae are covered with cream-dark brown mixed scales. Antenna filiform. Palpus upturned, is relatively thin and well developed (thicker in *diaphora*), dark brown scales predominate (whitish-cream scales more prominent on *diaphora*). As in *diaphora*, the labial palpus is curved upwards (strongly curved upwards in the *lehmanni*).

Thorax: Patagia and tegula with dark brown scales (blackish gray in *diaphora* and *lehmanni*). Forelegs are cream-brown checkered (similar coloration also occurs in *diaphora* and *lehmanni*).

Wing patterns: Forewing, from basal up to apex in male 8,5 mm, wingspan 17 mm, in female 9 mm and 18 mm respectively. Main colouration is light yellow. The tip of the median triangular spot extending from the costa to the middle of the wing is narrowed (rounded in *diaphora*, usually relatively pointed in *lehmanni*). The basal, median triangular spot, submarginal area and ciliae dark brown. The dark brown submarginal band is distinctly thicker and zigzag-shaped resembling 3 letters (relatively thin in *diaphora* and thinner in *lehmanni*). As in *diaphora*, the hind wing is covered with brown scales, relatively sparse in males and dense in females (it is relatively sparse in *lehmanni*). Underside the forewing is light yellow, covered with sparse brown scales from basal to discal area. Basal, and the median triangular spot, and submarginal area appear faintly on the underside.

Male genitalia (Fig. 5: 7): Uncus long, as in *diaphora* and *lehmanni*; subapical region broad, distinctly convex dorsally and concave ventrally (in *diaphora* the dorsal and ventral margins are not curved, but almost parallel). The apical ends with a hook, as in *diaphora* (in *lehmanni* the hook is relatively small). The anal cone is of approximately similar size in all three species, and is sclerotized ventrally, with the scaphium forked, sclerotized, and about half the length of the anal cone. Valve relatively narrow and long, apex triangular. In *diaphora*, the valve is relatively wide, without significant constriction to the apex, the point where the ampulla meets the costal margin is convex, and in *lehmanni*, it is relatively slightly convex, but the ampulla is more clearly bulb-like. Saccus short and broad V-shaped (relatively long and narrow in *diaphora* and *lehmanni*), apex slightly pinpoint-shaped. Juxta chitinous, quadrangular, distal end broad, deeply grooved and sides short-pointed. In *diaphora* groove is usually relatively shallow, in *lehmanni* thin grooved from base of juxta distally. Sacculus finger-like protrusion resembles a lightbulb. In *diaphora* it is thin and small finger-shaped, in *laticincta* it is completely bulb-like, while in *lehmanni* it is relatively bulb-shaped. Annellus plate covered with dense, short, spike-like hairs (similar in structure in all three species). Cornutus is relatively long and pointed, with a triangular projection in the middle of the ventrally. In *diaphora*, the cornutus projection is also ventral, but weak. In *lehmanni*, it is slightly projected dorsally.

Female genitalia (Fig. 6: 2): Three species were compared in *diaphora* (see above).

Habitat (Fig. 1: 3-4): Mountain steppes and Oak forest glades.

Adult: Nocturnal.

Vertical distribution: 1100-1420m.

Material studied: (8 male, 1 female); 1♂ (GP3339): Tunceli Pr., Ocavık, Gözeler (Yılanlıköy), 1410m, 27. vi. 2021, M. Kemal & S.S. Çalışkan leg. and 1♂ (GP3386) 1420m, 4. vii. 2022, M.Kemal & K. Akın leg. and 1♂1♀(GP3453, 3385): Mardin Pr., Ömerli, 4.5km SW, 1100m, 19.vi.2022, M.Kemal, K.Akın & E.Seven leg. (Cesa coll.). 1♂ (GPNo:605): Elaziğ Pr., Maden Dist., Gezin, 1295m, 3. vii. 2016 and 2♂: Yeşilova, 1380m, 16. vii. 2017 and 1♂: Çalkaya, 1350m, 27. vii. 2017, A. Çakır leg. (BATU coll.) and 1♂: (GPNo:606), Bitlis Pr., Mutki Dist., Alatoprak, 11. vii. 2012, K. Akın leg. (BEU coll.).

Ecological observations: This species was collected from a habitat dominated by Oak forests with herbaceous plants growing at the base in Mardin Prov., and from mountain steppes in Elazığ and Tunceli. However, the records from Gezin district of Elazığ province come from the mountain steppes where Oak forest remains were found.
Distribution World and Tükiye: Mardin (Staudinger, 1898) and according to current records it is known from Elazığ, Mardin and Tunceli (Türkiye).

Thalerastria lehmanni Hoppe & Fibiger, 2009

Thalerastria lehmanni Hoppe & Fibiger, 2009; Noctuidae Europea vl.11:67-69, pl.4, Type: male, Morocco, Anti Atlas, Tizguit, Ait Mansour, 30 km S. Tafraoute.
Diagnosis (Fig. 2: 3, Fig. 3: 5-6, Fig. 4: 3a-3d, Fig. 5: 8, Fig. 6: 3): Forewing span and its measurements from base to apex varies between individuals. In males; from the wing base to the apex 6-7 mm and wingspan is 14-15 mm. Females, from the wing base to the apex 7-8 mm, and wingspan 15-17 mm. The middle triangular spot extending from the costa to the middle of the wing is usually relatively pointed towards the distal. The wing base, middle triangular spot, submarginal area and cilia are blackish-brown. The submarginal band is thinner than in *laticincta* and the inner edge zigzags are not deep as *laticincta*. The wing ground color is brighter yellow than in *diaphora* and *laticincta*. It is smaller in size than *diaphora* and *laticincta*. Other morphological characteristics are presented in comparison with *diaphora* and *laticincta* (see above).
This species is new to the Türkiye fauna. According to faunistic data, it has only been identified in the Mediterranean region of Türkiye, in forested, rocky narrow valleys between 100-170 meters.
Habitat (Fig. 5-6): The habitat of *lehmanni* in Anamur is narrow, rocky and mixed forested valleys. The streams at the base continue uninterrupted throughout the summer, so it is possible to say of a warm and humid habitat.
Adult: Nocturnal.
Vertical distribution: 100-170m.
Material studied: (7 male, 5 female); 2♂(GP3356): İçel Prov., Anamur Dist., Ovabaşı, 2km W (33Am), 3 v 2018, 100m. 1♂1♀: Ovabaşı, 2km W (33Am), 14 vii 2018, 110m. 2♂2♀: Ovabaşı 2km W (33Am), 6 vi 2019, 100m. 1♂2♀ (GP3355♀): Gökçesu (33Ar), 4 viii 2019, 170m and 1♂(GP3354): Gökçesu (33Ar) 150m, 13 vii 2020, M. Kemal & A. Koçak leg. (Cesa coll.).
Ecological observations: In forested, rocky narrow valleys
Distribution World and Türkiye: S. Spain, Morocco, Algeria, Tunisia, Libya, Canary Islands (Fibiger et al. 2009), İçel Prov. Anamur distr. (Kemal et al., 2020a: listed as a *diaphora*) and present paper.

Discussion

With this study, we can say that the *Thalerastria* is represented by three species in Türkiye; *diaphora*, *laticincta* and *lehmanni*.

Thalerastria diaphora (Stadinger, 1879) was described from the Amasya province of Türkiye. Staudinger also described the *diaphora* var. *laticincta* Staudinger, 1898 from Mardin (Türkiye). Morphological studies show that *laticincta* is distinct from *diaphora* at the species level. For example, the shape, size and color of the patagia and palpus (Fig. 4: 1a-1d, 2a-2d). The wings are relatively large, the wing ground color is usually cinnamon in *diaphora*, while it is yellow in *laticincta*. The submarginal band of the wing is thicker in *laticincta* and the inner edges are deeply indented and ridged resembling the number 3 (Fig. 2: 2; Fig. 3: 3-4). In the male genitalia, characters such as the strongly concave costal margin of the valve, the sacculus projection being really ampoule-like, and the middle part of the uncus being wide towards the distal are important (Fig. 5: 7) . Staudinger, for the *diaphora* var. *laticincta*, stated that “var. *laticincta* is clearly larger than *diaphora* and the outer marginal band of the forewing is 2-3 times wider, with a deep inward fold at

the top and middle, a triangular black spot on the costal of the forewing and one or two smaller black spots between them towards the base and tip. Hindwing var. *laticincta* is also completely dark gray-black, even darker and blacker than typical *diaphora*" (Stgr., 1989). These descriptions are generally consistent with the *laticincta* individuals collected from Mardin. In a male and a female individual examined *laticincta*, the wing dimensions, coloration and the structure of the marginal bands make it easy to distinguish from *diaphora*, while in male genitalia, unlike the valve and bulb-shaped valve protrusion, it appears stable in *diaphora* individuals with its pinky-finger-shaped structure (Fig. 5: 1-6).

In the Turkish fauna checklists updated at different intervals (Koçak & Kemal, 2006, 2009, 2018), *laticincta* is presented as a synonym of *diaphora*. The same situation is also seen in the Hacker (2016) study. However, both morphological and genetic results showed that these two taxa are different species. Therefore, it was upgraded from subspecies to species rank in this study. The abdominal skin of male individuals of all three species were compared and presented for the first time in this study (Fig. 7: 1-3).

Specimens from the Anamur district in the Mediterranean region of Türkiye have similar characteristics to the *lehmanni* Hoppe & Fibiger, 2009 species in terms of external morphology and genital structures. The wing sizes of the examined specimens are generally smaller than *diaphora* and the *laticincta* and the ground color is a slightly brighter yellow. The genital structure is generally the same as the species of *lehmanni* described by Hoppe & Fibiger, 2009. However, in the Anamur specimens, the transtilla, not the sacculi, is slightly asymmetrical. Other morphological features have been mentioned above. Therefore, *lehmanni* is presented in this article as the new record for the fauna of Türkiye. Anamur samples were collected from the same locations in May-June and July-August. In this case, it is possible to say that the species produces at least two generations per year in the region. *Thalerastria lehmanni* was described by Hoppe and Fibiger in 2009 from Morocco as a different species than *diaphora*. Fibiger et al. (2009) stated the distribution of the species as Atlanto-Mediterranean, Northwest Africa and Canary Islands. In the same study, there is no any data about Türkiye in the type series and in the distribution information of the species in the world, but Türkiye is written under the photograph of the male genital given in the *lehmanni* description (38. *lehmanni*, Turkey, 6100 MF). This must be a typographical error. Otherwise it will cause a type locality problem for *lehmanni*.

İçel is generally rainy in spring and winter, and dry in summer. Anamur is no exception to these conditions. However, the locations where the samples were collected, Ovabaşı and Gökçesu, are actually narrow, rocky and forested valleys (Fig. 1: 5-6). Streams continue to flow at its base throughout the summer, and it is possible to talk about a warm and humid habitat. It is not a desert, semi-desert or a very arid habitat (Fibiger et al., 2009) as in North Africa and Spain. Accordingly to the Anamur records, its vertical distribution of 100-170 meters seem valid for now. This species was not found in the studies carried out above 1000 meters in the region (Kemal & Koçak, 2018, Kemal et al., 2020a). This suggests that the genus *Thalerastria* is more likely to be represented by *lehmanni* than by *diaphora* and *laticincta* in the Mediterranean coastal region of Türkiye. Initial molecular results have revealed that the genetic distance between these three species is at the species level. Our research on the subject will continue more comprehensively throughout Türkiye.

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Reference

Fibiger, M., Ronkay, L., Steiner, A. & A. Zilli, 2009. Noctuidae Europaeae, Volume 11:Pantheinae, Dilobinae, Acronictinae, Eustrotiinae, Nolinae, Bagisarinae, Acontiinae, Metoponiinae, Heliothinae, and Bryophilinae. *Entomological Press,* 504pp.

Hacker, H. H., 1996. Fauna und Biogeographie der Noctuidae des makaronesischen Archipels (Lepidoptera) *Esperiana* 4: 167-221.

Hacker, H. H., 2016. Systematic and Illustrated Catalogue of the Macroheterocera and Superfamilies Cossoidea Leach, [1815], Zygaenoidea Latreille, 1809, Thyridoidea Herrich-Schäffer, 1846 and Hyblaeoidea Hampson, 1903 of the Arabian Peninsula, with a survey of their distribution (Lepidoptera). *Esperiana* 20/1: 7-742.

Hoppe, H. & M. Fibiger, 2009. *Thalerastria lehmanni* sp.n. [in] Fibiger, M., Ronkay, L., Steiner, A. & A. Zilli, 2009. Noctuidae Europaeae, Volume 11: 67-69, pl.4.

Karsholt, O. & J. Razowski (eds), 1996. The Lepidoptera of Europe, A Distributional Checklist. *Apollo Books,* 380 pp.

Kemal, M. & A.Ö. Koçak, 2018. Annotated list of the moth fauna of Anamur district (İçel Prov., South Turkey), with descriptions of new species (Lepidoptera). *Misc. Pap*. 167: 1-45, 73 figs., 1 map

Kemal, M., Kızıldağ, S. & A. Ö. Koçak, 2020a. Annotated list of the Heterocera (Lepidoptera) of Anamur district (İçel Province, South Turkey) with description of a new species. *Priamus* 19 (1): 1–72, 87 figs.

Kemal, M., Kızıldağ, S., & A. Ö. Koçak, 2020b. Illustrated list of the Lepidoptera species of Zap valley (Hakkari Province, South East Turkey). *Priamus* 19 (2): 74-147, 133 figs.

Koçak, A.Ö. & M. Kemal, 2006. Checklist of the Lepidoptera of Turkey. *Cent. ent. Stud., Priamus Suppl.* 1: 1-196.

Koçak, A. Ö. & M. Kemal, 2009. Revised Checklist of the Lepidoptera of Turkey. *Cent. ent. Stud., Priamus Suppl.* 17: 1-253.

Koçak, A.Ö. & M. Kemal, 2015. Annotated list of the lepidopterological taxa in the info-system of the Cesa - Part I. Cent. ent. Stud., *Memoirs* 7: 1-4792, 1 Tab.

Koçak, A.Ö. & M. Kemal, 2018. A synonymous and distributional list of the species of the Lepidoptera of Turkey. Cent. ent. Stud., *Memoirs* 8: 1-487.

Lödl, M., S.G. Haszler, S. J. Kruspel, G. Ronkay, Ronkay, L. & Z. Varga, 2012. Fibigeriana Volume 1. The Vartian Collection Part I Noctuoidea. 303pp. *Heterocera Press*, Budapest.

Nye, I.W.B., 1975. The Generic Names Moths of the Vol (I) Noctuoidea, (part): Noctuidae, Agaristidae, Agaristidae and Nolidae. 568pp. *British Museum (Natural History)* London.

Robinson, G.S., 1976. The preparation of slides of Lepidoptera genitalia with special reference to the Microlepidoptera. *Entomologist's Gazette* 27: 127-132.

Salem, M. A., 2020. Revision of family Noctuidae (4) Subfamilies “Bryophilinae, Condicinae, Cuculliinae, Eriopinae and Eustrotiinae” of Egypt (Lepidoptera, Noctuidae). *Egypt. Acad. J. Biolog. Sci. (A. Entomology)* Vol. 13 (2): 1-34.

Seven, E. & K. Akın, 2019. Contributions to the knowledge of Macroheterocera (Lepidoptera) Fauna of Mutki District (Bitlis Province, East Turkey). *Sakarya University Journal of Science* 23(3), 435-445.

Seven, E. & A. Çakır, 2019. A Contribution to the moth fauna (lepidoptera, heterocera) of Elazığ Province, Turkey. *Bitlis Eren University Journal of Science and Technology* 9 (1):18–21.

Shirvani, A., 2012. Noctuidae moths (Insecta: Lepidoptera) with Iranian type locality. *Check List* 8(6): 1134–1157.

Seven, S., 2000. Kırıkkale Lepidoptera faunası ekoloji ve taksonomisi üzerine araştırmalar (Lepidoptera). *Priamus* 10 (1/2): 1-101.

Speidel, W. & M. Hassler, 1989. Die Schmetterlingsfauna der südlichen algerischen Sahara und ihrer Hochgebirge Hoggar und Tassili n'Ajjer (Lepidoptera). *Nachr. entomol. Ver. Apollo,* Frankfurt, Suppl. 8: 1-156.
Staudinger, O., 1879. Lepidopteren-Fauna Kleinasiens. *Horae Soc. Ent. Ross.* 14: 176-482.
Staudinger, O., 1898. Neue Lepidopteren aus Palaestina. *Dt. Ent. Z. Iris* 10 (1): pl. 4, 9 (1897), (2): 271-319, pl. 4.
Şerban, C. & A. Bercan, 2017. Family Noctuidae (Lepidoptera) in the Scientific Patrimony of the Natural Sciences Museum Cemplex Galati. *Muzeul Olteniei Craiova. Oltenia. Studii şi comunicări. Ştiinţele Naturii.* Tom. 33, No. 1:113-122.
Warren, W., 1912. Familie Noctuidae, [in] Seitz, A., Die Gross-Schmett. Bd. (11):31-350, Stuttgart.
Warren, W., 1914. Family: Noctuidae, [in] Seitz, A., The Macrolepidoptera of the World. pp. 9-444, Stuttgart.

Fig. 1. The Habitat of the *Thalerastria* species. *T. diaphora:* 1-Darende (marly soil, Malatya Prov.) and 2-Doğubayazıt (mountain steppe, Ağrı Prov.), *T. laticincta:* 3-Ovacık (mountain steppe, Tunceli Prov.) and 4-Ömerli (Oak forest glades, Mardın Prov.), *T. lehmanni*: 5- Ovabaşı and 6-Gökçesu (in mixed forested, rocky narrow valleys, Anamur, İçel Prov.).

Fig. 2.*Thalerastria* species around the light trap in their habitat. 1-*T. diaphora* in Darende (Malatya), 2-T. *laticincta* in Ovacık (Tunceli) and 3- *T. lehmanni* in Anamur (İçel).

Fig. 3. *Thalerastria* species male and female respectively. 1-2: *T. diaphor*a (GP3453♂ and GP3476♀), 3-4: *T. laticincta* (GP3454♂ and GP3385♀), 5-6: *T. lehmanni* (GP3356♂ and GP3477♀).

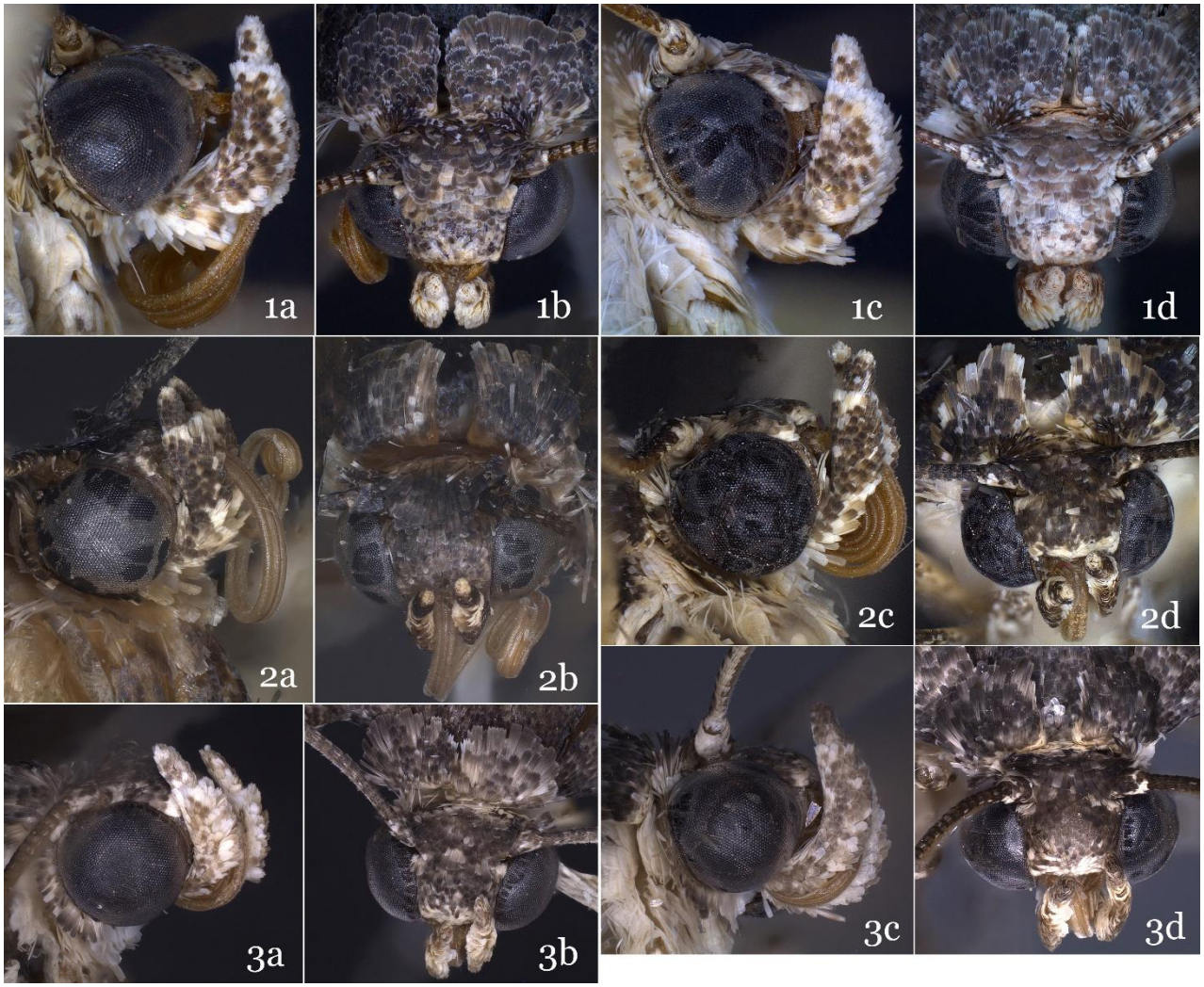

Fig. 4. *Thalerastria* species male and female palpus and patagia respectively (enlarged). 1a-1d: *T. diaphora* (Darende, Malatya), 2a-1d: *T. laticincta* (Ömerli, Mardin), 3a-1d: *T. lehmanni* (Anamur, İçel).

Fig. 5. *Thalerastria* species male genitalia (scale bar =0.5mm). **1-6:** *Thalerastria diaphora,* **1-** GP3340, Yüksekova (Hakkari), **2-**GP3359, Çatak (Van), **3-** GP3438, Darende (Malatya), **4-** GP3482, Ulukışla (Niğde), **5-** GP3571, Ayaş (Ankara), **6-** GP3572, Mihalıççık (Eskişehir). **7:** *T. laticincta* (GP3454), Ömerli (Mardın). **8:** *T. lehmanni* (GP3354), Anamur (İçel).

Fig. 6. Female genitalia in *Thalerastria* species (scale bar =0.5mm). **1-***diaphora* (GP3357, Kars), **2-** *T. laticincta* (GP3385, Mardin), **3-** *T. lehmanni* (GP3355, İçel).

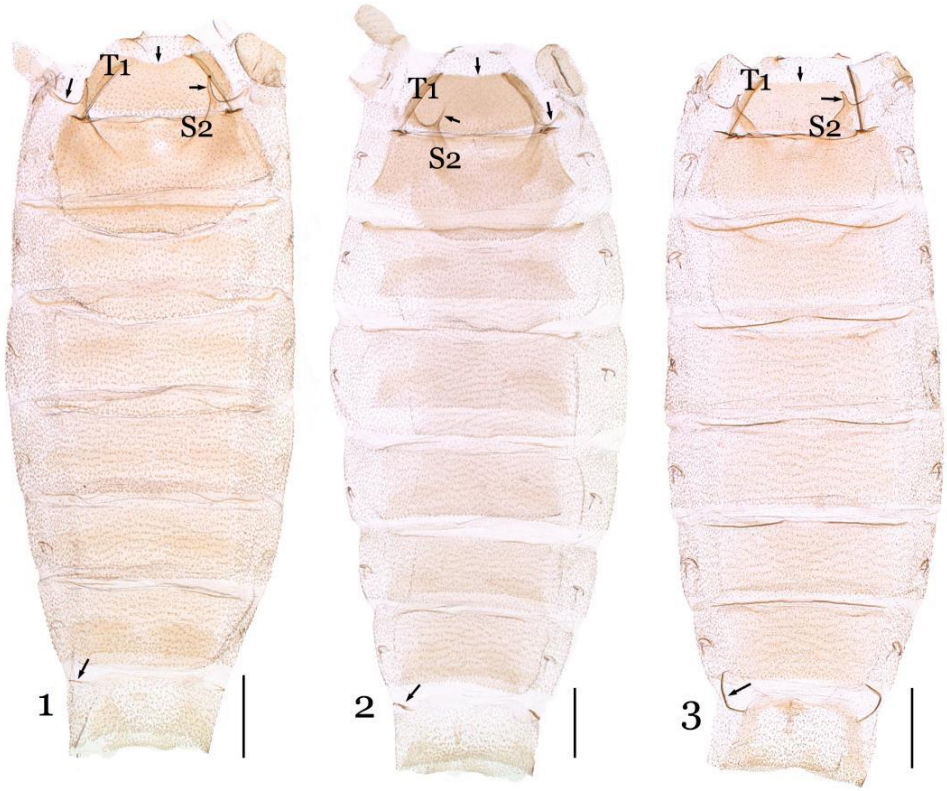

Fig. 7. Abdominal skin in *Thalerastria* species (scale bar =0.5 mm). **1-** *T. diaphora* (GP3438♂, Malatya), **2-** *T. laticincta* (GP3454♂, Mardin), **3-** *T. lehmanni* (GP3354♂, İçel).

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